Reply to the Comment [1] on "Scaling Laws for a System with Long-Range Interactions within Tsallis Statistics" [2]

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The fact that mean field theory is appropriate to describe an Ising model with long-range interactions has been already shown by Cannas and Tamarit [3]. Although not explicited in our Letter, we have used periodic boundary conditions in all our simulations, such that the maximum possible distance between two lattice sites is L/2.

We make no specific comments about the validity (or lack of validity) of Boltzmann-Gibbs statistical mechanics to describe long-range systems. Our paper does nothing but to compare the scaling functions derived from Boltzman-Gibbs statistics from those derived from the use of Tsallis entropy.

- [1] B.P. Vollmayr-Lee and E. Luijten, to appear in Phys. Rev. Lett., preprint cond-mat/0005444.
- [2] R. Salazar and R. Toral, Phys. Rev. Lett. 83 (1999) 4233.
- [3] S.A. Cannas and F.A. Tamarit, Phys. Rev. B54, R12661 (1996). S.A. Cannas, A. de Magalhaes and F.A. Tamarit, preprint cond-mat/9906340.